

Docket No.: M4065.0698/P698-A (PATENT)

Confirmation No.: 4072

Examiner: R. Rocchegiani

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Kristy A. Campbell et al.

Application No.: 10/736,617

Filed: December 17, 2003 Art Unit: 2825

For: METHOD OF FORMING NON-

VOLATILE RESISTANCE VARIABLE DEVICES, METHOD OF FORMING A PROGRAMMABLE MEMORY CELL OF MEMORY CIRCUITRY, AND A NON-VOLATILE RESISTANCE VARIABLE

DEVICE

RMING A

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Supplemental Information Disclosure Statement is filed more than three months after the U.S. filing date, AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

1812927 v1; 12%V301I.DOC DSMDB.1812927.1 Application No.: 10/736,617 Docket No.: M4065.0698/P698-A

Copies of the references on the PTO/SB/08 are not provided.

Those patents or publications which are marked with a double asterisk (**) next to the Cite No. in the attached form PTO/SB/08 are not supplied because they were previously cited by or submitted to the Office in a prior application number 09/943,190, filed August 29, 2001 and relied upon in this application for an earlier filing date under 35 U.S.C. 120.

In accordance with 37 CFR 1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Supplemental Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Credit Card in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p). Credit Card Payment Form SB-2038, with a signature from an authorized cardholder, is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0698/P698-A.

Application No.: 10/736,617 Docket No.: M4065.0698/P698-A

Dated: September 27, 2004

Respectfully submitted,

Thomas J. D'Amico

Registration No.: 28,371

Elizabeth Parsons

Registration No.: 52,499

DICKSTEIN SHAPIRO MORIN &

OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicants



PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paper work mediuction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Sut	stitute for form 1449A/PTO			Complete if Known		
١				Application Number	10/736,617	
	NFORMATION			Filing Date	December 17, 2003	
١ ٤	STATEMENT I	BY A	APPLICANT	First Named Inventor	Kristy A. Campbell	
	(use as many sh	eets as	necessary)	Art Unit	2825	
	(222 22 22 22 22 22 22 22 22 22 22 22 22			Examiner Name	R. Rocchegiani	
Sheet	1	of	5	Attorney Docket Number	M4065.0698/P698-A	

	U.S. PATENT DOCUMENTS						
xami ier nitials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant		
	**AA	2002/0072188	6/13/2002	Gilton	Figures Appear		
	**AB	2002/0106849	08/08/2002	Moore			
	**AC	2002/0123169	09/05/2002	Moore et al.			
	**AH	2002/0123248	09/05/2002	Moore et al.	- 		
	**AI	2002/0132417	09/09/2002	Li	 -		
	**AJ	2002/0160551	10//31/2002				
	**AK	2002/0168852	11/14/2002	Harshfield et al.	 		
	**AL	2002/0190289	12/19/2002	Harshfield et al.			
	**AF	2003/0032254	02/13/2003	Gilton			
	**AG	2003/0038301	02/27/2003	Moore	<u> </u>		
	**AM	2003/0043631	03/06/2003	Gilton et al.			
	**AN	2003/0045049	03/06/2003	Campbell et al.			
	**AO	2003/0045054	03/06/2003	Campbell et al.	-		
	**AP	2003/0047765	03/13/2003	Campbell	 		
	**AQ	2003/0047772	03/13/2003	Li			
	**AR	2003/0047773	03/13/2003	Li			
	**AS	2003/0048519	03/13/2003	Kozicki			
	**AT	2003/0048744	3/2003	Ovshinsky et al.			
	**AU	2003/0049912	03/13/2003	Campbell et al.			
	**AV	2003/0068861	04/10/2003	Li			
	**AW	2003/0068862	04/10/2003	Li			
	**AX	2003/0095426		Hush et al.			
	**AY	2003/0096497		Moore et al.			
	**AZ	2003/0107105	06/12/2003	Kozicki			
	**AA1	2003/0117831		Hush			
	**AB1	2003/0128612		Moore et al.			
	**AC1	2003/0137869	07/24/2003	Kozicki			
	**AD1	2003/0143782	07/31/2003	Gilton et al.			
-	**AE1	2003/0155589		Campbell et al.	 		
	**AF1	2003/0155606	08/21/2003	Campbell et al.			
\neg	**AG1	2003/0156447	08/21/2003	Kozicki	 		
	**AH1	2003/0156463		Casper et al.			
	**AI1	2003/0209728		Kozicki et al			
\neg	**AJ1	2003/0209971		Kozicki et al	 		
	**AK1	2003/0210564	11/13/2003	Kozicki et al			
	**AL1	2003/0212724	11/2003	Ovshinsky et al.			
\neg	**AM1	2003/0212725	11/2003	Ovshinsky et al.			
	**AN1	2004/0035401	2/2004	Ramachandran et al.			
	**A01	3,271,591	9/1966	Ovshinsky	 		
	**AP1	3,622,319		Sharp			
\dashv	**AQ1	3,743,847		Boland	 		
	**AR1	3,961,314	6/1976	Klose et al.	 		
\dashv	**AS1	3,966,317	6/1976	Wacks et al.	 		
$\overline{}$	**AT1	3,983,542	11/1976	Ovshinsky			

PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Sul	Substitute for form 1449A/PTO			Complete if Known				
				CLOSURE	<u> </u>	Application Number	10/736,61	7
			. – . –			Filing Date	Decembe	r 17, 2003
١	STATEMENT BY APPLICANT			First Named Inventor	Kristy A. C	Campbell		
	(use as many sheets as nocessary)			Art Unit	2825			
	(use as many sheets as necessary)				Examiner Name	R. Rocche	egiani	
Sheet		2	of	5		Attorney Docket Number		98/P698-A
Sheet			loi	<u> </u>		Attorney Docket Number	W4065.06	90/P090-A
	**AU1	3,988,720		10/1976	Ovsh			
	**AV1	4,177,474		12/1979		insky		
		4,267,261	<u> </u>	5/1981		nan et al.		
<u> </u>	**AX1	4,269,935	_	5/1981		ers et al.		
—		4,312,938		1/1982		er, et al.		
	**AZ1 **AA2	4,320,191		3/1982		ikawa et al.		
	**AB2	4,405,710 4,499,557		9/1983		subramanyam et al.		
	**AC2	4,499,557		2/1985 7/1986		berg et al. son et al.		
\vdash				8/1986				
	**AE2	4,608,296 4,637,895		1/1987		n et al.		
\vdash	**AF2	4,646,266		2/1987		insky et al. insky et al.		-
		4,664,939		5/1987	Ovsh			
		4,668,968		5/1987		insky insky et al.		
 	**Al2	4,670,763		6/1987		insky et al.		
\vdash	**AJ2	4,673,957		6/1987		insky et al.		
	**AK2	4,678,679		7/1987			-	
		4,696,758		9/1987		Ovshinsky Ovshinsky et al.		
		4,698,234		10/1987		ninsky et al.		
<u> </u>		4,710,899		12/1987		g et al.		
		4,728,406		3/1988		rjee et al.		
	**AP2	4,737,379		4/1988		ens et al.		
		4,766,471	*	8/1988	Ovsh	insky et al.		
		4,769,338		9/1988		insky et al.		
		4,775,425	-	10/1988	Guha			
		4,788,594	•	11/1988		insky et al.		•
	**AU2	4,795,657		1/1989		igoni et al.		
	**AV2	4,809,044		2/1989	Pryor			
		4,818,717		4/1989	Johns	son et al.		
		4,843,443		6/1989	Ovsh	insky et al.		
	**AY2	4,845,533		7/1989	Pryor	et al.		
	**AZ2	4,847,674		7/1989	Sliwa	et al.		
		4,853,785		8/1989		nsky et al.		
	**AB3	4,891,330		1/1990	Guha			
		5,128,099		7/1992		d et al.		
	**AD3	5,159,661		10/1992		nsky et al.		
		5,166,758		11/1992		nsky et al.		
	**AF3	5,177,567				et al.		
		5,219,788		6/1993		athey et al.		
		5,238,862				k et al.		
\vdash	**AI3	5,296,716		3/1994		nsky et al.		
		5,315,131				noto et al.		
		5,335,219				nsky et al.		
		5,341,328 5,350,484		8/1994		nsky et al.		
		5,350,484		9/1994		ner et al.		
		5,360,981		10/1994 11/1994	Ovshi			
		5,406,509		4/1995		et al.		
		5,406,509	<u></u>			nsky et al.		
	<u></u> ∧ע3	U,714,2/1		טפפו זכן	Ovsni	nsky et al.		

PTO/SB/08A (10-01)
Approved for use through 10/31/2002.OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO			Complete if Known					
ļ					_	Application Number	10/736,61	7
				CLOSUR		Filing Date	Decembe	r 17, 2003
8	STAT	EMENT	BY A	PPLICANT		First Named Inventor	Kristy A. Campbell	
					Art Unit	2825		
•	(use as many sheets as necessary)						 	
<u> </u>	· · · · · ·	· · · · · · · · · · · · · · · · · · ·	1 -1			Examiner Name	R. Rocche	
Sheet	ļ	3	of	5		Attorney Docket Number	M4065.06	98/P698-A
	**AR3	5,512,328		4/1996		imura et al.		
	**AS3	5,512,773		4/1996	Wolf			
-	**AT3	5,534,711		7/1996		insky et al.		
	**AU3 **AV3	5,534,712		7/1996		insky et al.		
-		5,536,947 5,543,737		7/1996 8/1996	Ovsh	y et al.		
-	**AX3	5,591,501		1/1997		insky et al.		
	**AY3	5,596,522		1/1997		insky et al.		
	**AZ3	5,687,112		11/1997	Ovsh			
	**AA4	5,694,054		12/1997		insky et al.		
	**AB4	5,714,768		2/1998		insky et al.		
	**AC4	5,726,083		3/1998	Taka			
	**AD4	5,789,277		8/1998		rik et al.		
	**AE4	5,814,527		9/29/1998	Wols	tenholme et al		
	**AF4	5,818,749		10/06/1998	Harsh	nfield		
	**AG4	5,825,046		10/1998	Czub	atyj et al.		
		5,841,150		11/1998	Gonz	alez et al.		
	**AI4	5,846,889		12/1998		Harbison et al.		
	**AJ4	5,851,882		12/22/1998	Harsh			
	**AK4	5,869,843		2/9/1999	Harsh			
		5,896,312		4/20/1999		ki et al.		
		5,912,839		6/1999		insky et al.		
		5,914,893		6/22/1999		ki et al.		
		5,933,365		8/1999		y et al.		
	**AP4 **AQ4	5,998,066 6,011,757		1/2000	Block Ovsh			
		6,031,287		2/29/2000	Harst			
		6,077,729		6/2000	Harsh	 		
		6,084,796		7/4/2000		ki et al.		
		6,087,674		7/2000		nsky et al.		
		6,141,241		10/2000		nsky et al.		
		6,177,338		1/2001	Liaw			
		6,117,720		9/2000	Harsh			
-		6,143,604		11/2000		g et al.		
	**AZ4	6,236,059		5/2001		einholme et al.		
		6,274,805		08/2001	Naka	zawa et al.		
\Box		6,297,170		10/2001		el et al.		
		6,300,684		10/2001		alez et al.		
		6,316,784		11/2001		ik et al.		
		6,329,606		12/2001		nan et al.		
		6,339,544	·	1/2002		g et al.		
		6,348,365 6,350,679		2/19/2002 2/2002		e et al.		
		6,376,284		4/2002		niel et al. alez et al.		
		6,391,688		5/2002		alez et al. alez et al.		
		6,404,665		6/2002		y et al.		
		6,414,376		7/2002		ır et al.		
		6,418,049		7/9/2002		ki et al.		
		6,420,725	· · · · · · · · · · · · · · · · · · ·		Harsh			

PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Sui	Substitute for form 1449A/PTO			Complete if Known				
					_	Application Number	10/736,61	7
1	INFORMATION DISCLOSURE					Filing Date	Decembe	r 17, 2003
8	STATEMENT BY APPLICANT				First Named Inventor	Kristy A. (Campbell	
	(Art Unit	2825		
	(use as many sheets as necessary)					Examiner Name	R. Rocche	agiani
 	I		T. T					
Sheet		4	of	5		Attorney Docket Number	M4065.06	98/P698-A
	**AO5	6,423,628		7/2002	Li et	al.		
	**AP5	6,429,064		8/2002	Wick	er		
	**AQ5	6,437,383		8/2002	Xu			
	**AR5	6,440,837		8/27/2002	Harsl		· · · ·	
		6,462,984		10/2002	Xu et	al.		
	**AT5 **AU5	6,480,438		11/2002	Park	-A -I		
-	**AV5	6,487,113 6,501,111		11/2002 12/2002	Park			
		6,507,061		1/2002	Lowe	ens et al.		
\vdash	**AX5	6,511,862		1/2003		ens et al.		
	**AY5	6,511,867		1/2003		ry et al.		
	**AZ5	6,512,241		1/2003	Lai	.,		
	**AA6	6,514,805		2/2003	Xu et	al.		
	**AB6	6,531,373		3/2003	Gill e	t al.		
	**AC6	6,534,781		3/2003	Denn			
	**AD6	6,545,287		4/2003	Chiar			
	**AE6	6,545,907		4/2003		ry et al.		
		6,555,860		4/2003		Lowery et al.		
	**AG6	6,563,164		5/2003		Lowery et al.		
	**AH6	6,566,700		5/2003	Xu			
	**AI6 **AJ6	6,567,293 6,569,705		5/2003		ry et al.		
 	**AK6	6,570,784		5/2003	Lowe	ng et al.		
	**AL6	6,576,921		6/2003	Lowe			
		6,586,761		7/2003	Lowe			
	**AN6	6,589,714		7/2003		on et al.		
		6,590,807		7/2003	Lowe			
		6,593,176		7/2003	Denn			
		6,597,009		7/2003	Wicke	er		
		6,605,527		8/2003		ison et al.		
		6,613,604		9/2003		on et al.		
	**AT6	6,621,095		9/2003		ng et al.		
-		6,625,054		9/2003		ry et al.		
		6,638,820 6,642,102		10/2003 11/2003	Moore	<u> </u>		
		6,646,297		11/2003		ison		
		6,649,928		11/2003		Dennison Dennison		
		6,667,900		12/2003	+	ry et al.		
	**AA7	6,671,710		12/2003		insky et al.	-	
	**AB7	6,673,648		1/2004	Lowre	у		
		6,673,700		1/2004		ison et al.		
		6,674,115		1/2004		ens et al.		
		6,687,427		2/2004		ılingam et al.		
		6,690,026		2/2004	Peter			
		6,696,355		2/2004	Denn			
		6,687,153		2/2004	Lowe	/		
		6,707,712 6,714,954		3/2004 3/2004	Lower	nsky et al.		
	707	0,7 17,304		10/2004	UVSIII	nony ct al.		

SEP 2 7 2004 35

PTO/SB/08A (10-01)
Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

k Reduction (1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449A/PTO Application Number 10/736,617 INFORMATION DISCLOSURE December 17, 2003 Filing Date STATEMENT BY APPLICANT First Named Inventor Kristy A. Campbell Art Unit 2825 (use as many sheets as necessary) Examiner Name R. Rocchegiani Sheet 5 of 5 Attorney Docket Number M4065.0698/P698-A

		FOREI	GN PATENT	DOCUMENTS		
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant	
Initials*	No.1	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear	T ⁶
	**BA	JP 5-6126916	10/19981	Akira et al.		
	**BB	WO 00/48196	08/17/2000	Kozicki et al.		
	**BC	WO 02/21542	03/14/2002	Kozicki et al.		

Examiner	Date	i
Signature	 Considered	
•		

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²

Examiner	Date
Signature	Considered

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.